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IRICO GROUP CORP. AND
IRICO DISPLAY DEVICES CO., LTD

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION**

IN RE: CATHODE RAY TUBE (CRT)
ANTITRUST LITIGATION

Master File No.: 07-cv-05944 JST

MDL No. 1917

This document relates to:

ALL INDIRECT PURCHASER ACTIONS

ALL DIRECT PURCHASER ACTIONS

**DEFENDANTS IRICO GROUP CORP.
AND IRICO DISPLAY DEVICES CO.,
LTD.'S POST-HEARING PROPOSED
FINDINGS OF FACT AND
CONCLUSIONS OF LAW REGARDING
DAMAGES**

Date: May 19–21, 2025

Time: 8:30 a.m. to 1:30 p.m.

Judge: Honorable Jon S. Tigar

Courtroom: 6, 2nd Floor

1 Defendants Irico Group Corporation (“Group”) and Irico Display Devices Co., Ltd.
2 (“Display”) (together, the “Irico Defendants” or “Irico”) hereby submit the following updated
3 proposed findings of fact and conclusions of law, pursuant to the Court’s Order Re: Damages
4 Hearing, ECF No. 6459 at 3. One update to these proposed findings and conclusions is the removal
5 of any findings of fact and conclusions of law related to duplicative damages and trebled damages
6 because Irico and the IPPs have stipulated, and the Court has ordered, that those issues be deferred
7 without waiver until after any damages are determined. *See* ECF No. 6476 at 3.

8 **I. PROPOSED FINDINGS OF FACT**

9 **CRT Market**

10 1. CDTs and CPTS are distinct products, with CDTs being used in color computer
11 monitors and CPTs being used in color televisions. (ECF No. 6460 at 1 ¶ 1)

12 2. The CDT and CPT markets changed dramatically between 1995 and 2006. (Ex. 204,
13 Jul. 21, 2023 Guerin-Calvert Rep. at 44-47 ¶ 59-60, Figures 11, 12; *id.* at 62-63 ¶ 87; *id.* at 64-67 ¶
14 90 & n.174; *id.* at 68-71 ¶¶ 95, 96 & Figures 16, 17)

15 3. LCD products increasingly displaced CRT products throughout the relevant time
16 period, with differing impacts from year to year. (Ex. 3, Apr. 15, 2014 Netz Rep. at 35, Exhibit 13,
17 Exhibit 14)

18 4. Increased demand for CDT desktop computers dramatically increased demand for
19 CDTs in 1995 and 1996. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. at 33-34 ¶¶ 61-62 & Figure 14;
20 Ex. 5, Sept. 26, 2014 Netz Rebuttal at 50)

21 5. Some manufacturers switched production from curved CPTs to flat CPTs, which had
22 higher prices than curved CPTs and thus would impact the overcharge analysis. (Ex. 10, Aug. 5,
23 2014 Willig Rep. ¶¶ 24, 79, 82)

24 **DPP Damages**

25 6. The DPPs’ expert Johnson uses a single regression model to estimate overcharges on
26 CPTs and CDTs. (Ex. 200, Nov. 19, 2021 Johnson Rep. at 51-52 ¶78 & Figure 16)

27 7. Johnson used a single regression that pools CPTs and CDTs to calculate the purported
28 overcharges as to those two products. (Ex. 202, May 26, 2023 Johnson Rep. ¶ 50)

1 8. Pooling of the two products into a unitary regression without the ability to test
2 variation of market factors between those products is contrary to the economic principles underlying
3 antitrust damages. (ABA SECTION OF ANTITRUST LAW, PROVING ANTITRUST DAMAGES: LEGAL AND
4 ECONOMIC ISSUES 222 (3d ed. 2017))

5 9. Johnson’s model does not test different effects on CPTs and CDTs for (1) G7
6 unemployment rate, (2) G7 industrial production growth rate, (3) U.S. Producer Price Index (“PPI”) of specialty glass, (4) PPI of specialty glass in Korea, (5) lagged CRT price, (6) lagged CRT quantity, (7) a time trend, or (8) a time trend-squared. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 61 ¶ 84 & n.160)

10 10. Guerin-Calvert modified Johnson’s model to allow for the possibility that the market
11 forces in Johnson’s model could have different effects on CPT prices than on CDT prices. That
12 change produced a statistically significant result showing that Johnson’s market forces did in fact
13 influence CPT and CDT prices differently—a possibility excluded at the outset by the mere structure
14 of Johnson’s model. (*Id.*)

15 11. Guerin-Calvert separated Johnson’s single regression into two separate regressions,
16 one for CPTs and one for CDTs, while maintaining all of the market forces Johnson had included in
17 his model and allowing for the possibility that those market forces could impact CPT and CDT prices
18 differently. (*Id.* ¶ 93)

19 12. Using one regression for CPTs and CDTs results in a lower overcharge for Irico. (Ex.
20 203, Sept. 1, 2023 Johnson Rebuttal ¶ 95)

21 13. Johnson estimates uniform CDT and CPT overcharges for the vast majority of the
22 class period, from 1996 to 2005. (Ex. 202, May 26, 2023 Johnson Rep. at 56, Figure 19)

23 14. Johnson uses dummy variables to calculate cartel effects during two time periods: (1)
24 Q2 1995 through Q2 2006; and (2) Q3 2006 through Q1 2007. (*Id.* at 31, Figure 3 & n.2a, 2b)

25 15. Because Johnson’s model uses one variable that estimates price impacts from 1995
26 to 2006, Johnson’s model cannot account for changes in market conditions that are not addressed by
27 his other variables. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 52 ¶ 86 & n.162)

1 16. Johnson’s model suffers from omitted variables biasing the results. *See* Ex. B, May
2 20, 2025 (Vol. 2) Tr. at 241:22-242:1

3 17. Johnson’s variables do not capture any of the specific shift in demand to CDTs in
4 1995 and 1996. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 64-67 ¶¶ 90-91 & n.175.)

5 18. Guerin-Calvert tested Johnson’s model to incorporate an annual conspiracy dummy
6 variable instead of using one conspiracy variable for the entire period of 1995 through 2006 and
7 found that the model, as modified, provided substantially different overcharge estimates between Q2
8 1998 and Q2 2006 for both CPTs and CDTs. (*Id.* at 63 ¶ 88 & n.166) Her testing also indicated that
9 Johnson’s constraints on his model, which imposed uniform overcharges, were false with a
10 probability of at least 99% or rejection at a 1% level of statistical significance. (*Id.* at 63-64 ¶ 88)

11 19. Adding annual dummy variables can provide more accurate overcharge estimates
12 when the effectiveness of the conspiracy varied over time. (*Id.* at 63 n.167)

13 20. Guerin-Calvert’s modifications to Johnson’s model reduced the bias in Johnson’s
14 original model and enabled a more reliable and accurate overcharge estimate. (Ex. B, May 20, 2025
15 (Vol. 2) Tr. at 246:11-20; 259:18-260:5)

16 21. Guerin Calvert explained that negative overcharges are not problematic but can,
17 instead, reflect confounding factors that are not accounted for. (Ex. B, May 20, 2025 (Vol. 2) Tr. at
18 249:21-251:6) They could be indicators that the conspiracy was ineffectual or was outweighed by
19 other events that took place during the relevant time period that exerted downward pressure on
20 prices. (Ex. A, May 19, 2025 (Vol. 1) Tr. at 148:3-149:14)

21 22. None of the “negative” overcharges Guerin-Calvert derived from Johnson’s modified
22 model are statistically significant; they are small and include zero and small positives in their
23 confidence intervals. *See id.* at 248:4-248:9; Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. at 82, Table
24 8)

25 23. The negative conspiracy indicators from Johnson’s modified model are likely caused
26 by the fact that Johnson does not adequately control for changing conditions in the CRT markets.
27 (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at ¶ 89)

1 24. Johnson estimated a separate overcharge for the Q3 2006 to Q1 2007 sub-period of
2 the class period because it was “plausible” that the cartel effect would be different from Q3 2006 to
3 Q1 2007 and Johnson’s test confirmed that the results for one product were statistically significantly
4 different from the results of that product during the rest of the relevant time period. (Ex. A, May 19,
5 2025 (Vol. 1) Tr. at 157:14-158:14) The majority of Guerin-Calvert’s annual dummy indicators use
6 more data than Johnson’s Q3 2006 to Q1 2007 dummy indicators. (Ex. 204, Jul. 21, 2023 Expert
7 Rep. of Guerin-Calvert at 72, n.181)

8 25. Guerin Calvert tested the results of her dummy variables and found that the data
9 rejected the hypothesis that the annual fixed effects (*i.e.*, estimated annual overcharges) were the
10 same during the relevant time period. *Id.*

11 26. Applying Guerin-Calvert’s corrections to Johnson’s model results in reduced average
12 overcharges of 7.0% for CDTs and 1.5% for CPTs. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at
13 ¶11(g))

14 27. Johnson treated 100% of sales without customer information as DPP sales. (Ex. 204,
15 Jul. 21, 2023 Guerin-Calvert Rep. ¶113) Guerin-Calvert modified Johnson’s assumption by applying
16 the known DPP sales proportions for sales with customer information (49% of CRTs and 67% of
17 CRT finished products) to the sales without customer information under the assumption that sales
18 lacking customer information were to DPPs as often as sales that had customer information. (Ex.
19 204, Jul. 21, 2023 Guerin-Calvert Rep. at ¶ 114) Johnson conceded that these modifications are
20 appropriate and adjusted his calculations to incorporate them. (Ex. A, May 19, 2025 (Vol. 1) Tr. at
21 115:2-116:1) This correction is undisputed and should be applied.

22 28. Johnson calculated one Defendant, SDI’s (Samsung) CRT sales to DPPs without
23 using the best available data. Guerin-Calvert corrected Johnson’s calculations using better data. (Ex.
24 204, Jul. 21, 2023 Guerin-Calvert Rep. ¶ 116) Johnson accepted Guerin-Calvert’s critique. (Ex. A,
25 May 19, 2025 (Vol. 1) Tr. at 116:20-116:7) This correction is undisputed and should be applied.

26 29. Johnson faced two types of missing data: (1) missing CRT and finished product sales
27 data from an alleged conspirator for the entire class period; and (2) missing CRT and finished
28 product sales data only for certain years, for Thomson, Samsung, and Mitsubishi. *Id.* Johnson dealt

1 with both types of missing data the same way: (a) he estimated global sales by the alleged conspirator
2 using industry data, (b) he assumed that the global-to-U.S. ratio of sales applicable to the missing
3 sales data was equal to his estimate of an industry average ratio, and (c) he assumed that DPP class
4 share (i.e., the share of its U.S. sales that was not made to optouts or alleged conspirators) applicable
5 to the missing sales data was equal to the DPP class share in the sales data that were available. (Ex.
6 202, May 26, 2023 Johnson Rep. ¶¶ 88-90, 96-97)

7 30. Guerin-Calvert calculated alternative sales estimates for the alleged conspirators who
8 are missing data in only some years by using firm-specific information: each defendant's own sales
9 data from other years, to estimate the DPP class share and U.S.-to-global CRT sales ratio instead of
10 using global industry data and estimates derived from all alleged conspirators' sales data. (Ex. 204,
11 Jul. 21, 2023 Guerin-Calvert Rep. 83-84 ¶¶ 118-119 & n.215) Employing that firm-specific
12 information lowered each relevant alleged conspirator's estimated U.S. sales of CRTs or CRT
13 finished products to the DPPs. (*Id.* at 84 ¶ 119) Guerin-Calvert's corrections to Johnson's
14 methodology for calculating U.S.-to-global CRT sales ratio and DPP class purchases improves the
15 estimates by using firm-specific data.

16 31. Applying Guerin-Calvert's corrections to Johnson's model results in DPP damages
17 of \$226.4 million for CDTs and \$164.2 million for CPTs. (Ex. 204, Jul. 21, 2023 Guerin-Calvert
18 Rep. at Appendix D, Figure 19)

19 32. Guerin-Calvert's adjusted Netz model (with Guerin-Calvert's corrections) can be
20 applied to DPP damages by applying the corrected overcharge estimates, of 1.6% for CDTs and
21 2.3% for CPTs, to DPPs' volume of commerce. Through its expert, Irico can provide that
22 calculation, which requires differentiating between DPPs' volume of commerce for CRTs and CRT
23 finished products.

24 **IPP Damages**

25 33. IPPs' expert Netz calculated overcharge estimates using a "reduced-form price
26 equation model," which incorporates a "single equation that relates prices to supply factors,
27 consumer demand, and the competitiveness of the marketplace." (Ex. 3, Apr. 15, 2014 Netz Rep. at
28 98)

1 34. Irico's expert Guerin-Calvert concluded that Netz's model suffers from a
2 fundamental flaw in the form of omitted variables that bias the model's results, rendering the model
3 unreliable. (Ex. B, May 20, 2025 (Vol. 2) Tr. at 234:20-235:1; Ex. 11, Aug. 5, 2014 Guerin Calvert
4 Rep. at ¶ 124)

5 35. The only explanatory variables Netz uses in her model measure: (1) the price charged
6 for CRT models, (2) the price of CRT glass, (3) Organisation for Economic Co-operation and
7 Development (OECD) output rates, (4) OECD unemployment rates, (5) the revenue from the sale of
8 LCD finished TVs or monitors as a share of total revenues from the sale of finished TVs or monitors,
9 (6) time variables, (7) screen sizes, and (8) identity of model manufacturers. (*Id.* at 104)

10 36. Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 124); Ex. A, May 19, 2025 (Vol. 1) Tr.
11 at 40:18-40:24. Netz's model assumes a stable relationship with prices over the years. (Ex. 10, Aug.
12 5, 2014 Willig Rep. ¶ 84) For instance, with the variables for OECD GDP (variable 3) and OECD
13 unemployment rate (variable 4), Netz's model assumes that consumers responded similarly in their
14 CPT TV purchases in 2000 as they did in 2008; yet, "the impact of the Great Recession in 2008-09
15 (after the alleged cartel ended) on CPT demand and prices is not likely to be the same as the impact
16 of the recession in 2000 (during the alleged cartel), not just because of the greater magnitude of the
17 2008 recession but also because by 2008 CRT TVs had largely been displaced by LCD and plasma
18 TVs." (*Id.* ¶ 85)

19 37. Guerin-Calvert adjusted Netz's model to add a variable to measure worldwide
20 quarterly shipments of desktop computers when measuring CDT overcharges and found that the
21 variable was statistically significant. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 124) Netz testified
22 that the demand for desktop computers is heavily linked to the price of monitors. (Ex. A, May 19,
23 2025 (Vol. 1) Tr. at 80:16-81:3)

24 38. Robert Willig adjusted Netz's model to add a variable to measure sales in U.S.
25 electronics retail stores as an approximation for consumer demand for TVs and found that the
26 variable was statistically significant. (Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 100)

27 39. Guerin-Calvert and Willig adjusted Netz's model when calculating CRT overcharges
28 by adding additional cost controls: the cost of shipping, an index of labor cost in Korea, and a

variable for the Korean Won-US dollar exchange rate. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 125; Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 100) Guerin-Calvert found that every variable was statistically significant except the Korean labor cost variable when used to calculate CDT overcharges, while Willig found that every variable was statistically significant when used to calculate CPT overcharges. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 125; Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 100). Guerin-Calvert found that all three cost controls were jointly significant. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 38)

40. Willig determined that adding the new cost and demand variables changes the CPT overcharge calculated by Netz's model from 9.8% to 2.3%. (Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 101)

41. Netz's model does not have any way of tracking manufacturers' changing the characteristics of their products in response to that competition. (Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 82)

42. Netz does not dispute that the explanatory variables added by Guerin-Calvert and Willig are statistically significant. (Ex. A, May 19, 2025 (Vol. 1) Tr. at 79:12-83:11; 102:25-103:6)

43. Netz does not assert that any of the explanatory variables added by Guerin-Calvert and Willig are collinear with the cartel variables. *Id.* at 98:7-98:14

44. Netz calculates overcharges with two cartel effects variables: (1) cartel effects from 1995 through 2006 and (2) cartel effects in 2007. (*Id.* at 35:18-36:2)

45. Guerin-Calvert tested whether the overcharges in 1995 through 1996 differed from the overcharges between 1997 and 2006 and found significantly different and lower higher overcharge estimates in 1995 through 1996 than from 1997 to 2006. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 112, Table 6)

46. Guerin-Calvert added a separate control variable to measure the effects of the conspiracy in 1995 and 1996. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 130)

47. Guerin-Calvert used the overcharges estimated by her modifications to the Netz model from 1997 to 2006 to estimate overcharges in 1995 and 1996 because the evidence indicated that the "overcharges" estimated by the modified Netz model in 1995 and 1996 were likely biased

1 by the effects of the Windows 95 demand shock. (Ex. B, May 20, 2025 (Vol. 2) Tr. at 280:8-281:1;
2 *see also* Ex. C, May 21, 2025 (Vol. 3) Tr. at 397:8-12)

3 48. Guerin-Calvert concluded that the but-for price estimated by the adjusted Netz model
4 in 1995 and 1996 is heavily influenced by the omitted variables related to increased demand for
5 desktop monitors. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. at ¶130)

6 49. When Guerin-Calvert tested Netz's model on CDT prices, she found that calculating
7 a separate overcharge for the period between 1995 to 1996 changed the overcharge on CDTs from
8 1997 to 2006 to be not statistically significant. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 114; Ex.
9 B, May 20, 2025 (Vol. 2) Tr. at 397:13-398:3)

10 50. Netz measured the effects of the conspiracy with a different dummy variable in 2007
11 because she thought that cartel members would have behaved differently in 2007. (Ex. A, May 19,
12 2025 (Vol. 1) Tr. at 36:12-36:20). Netz agreed that "the results of [her] models confirm that that
13 [sic] was a good decision to separate out 2007 from 1995 to 2006" because Netz found "significantly
14 different and lower overcharges for 2007 than for 1995 and 2006." (*Id.* at 36:12-36:25)

15 51. Netz acknowledges that Windows 95 was introduced in 1995, that its introduction
16 would have led to an increase in demand for CDT monitors, and that an increase in demand for
17 Windows 95 would, all other things being equal, increase the price of CDT monitors. (*Id.* at 91:22-
18 92:20)

19 52. Netz's model assumes that the but-for price would have decreased after the
20 introduction of Windows 95. (Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. at 77 ¶119, Figure 32)

21 53. Netz testified that her OECD GDP and time trend variables capture the effects of
22 increased demand for desktop monitors in 1995. (*Id.* at 92:18-93:3)

23 54. Netz testified that the OECD GDP variable provides "the general macroeconomic
24 condition under which consumers were choosing to buy CRT TVs and monitors, with the idea that
25 they will buy more of these products the better the economy is doing overall." (*Id.* at 40:18-40:24)
26 It is not specific to demand for desktop monitors.
27
28

1 55. Netz testified that the role of the time trend variable was to allow for the fact that
2 “price might be trending downwards, and it might start trending downwards more quickly or less
3 quickly as time goes on.” (*Id.* at 42:24-43:6) It is not specific to demand for desktop monitors.

4 56. Applying Guerin-Calvert’s modifications to Netz’s model results in CDT
5 overcharges of 1.6%, compared to the 28.2% estimated by Netz. (*Id.*)

6 57. For CPTs, Guerin-Calvert analyzed and adopted Willig’s corrections to Netz’s
7 model, as discussed above, which calculated CPT overcharges of 2.3%, compared to the 9.8%
8 estimated by Netz. (Ex. 14, Mar. 16, 2022 Guerin-Calvert Rep. ¶ 14(f))

9 58. Guerin-Calvert’s modifications to Netz’s model leads to more accurate and reliable
10 damages.

11 59. Applying Guerin-Calvert’s corrections to Netz’s model and original volume of
12 commerce results in IPP damages of \$142,959,329 for CDTs and \$188,460,378 for CPTs. (Ex. 14,
13 March 16, 2022 Guerin-Calvert Report at Appendix F, Table F-3) These damages are overstated
14 because the volume of commerce should be modified to account for the fact that the class periods
15 for Hawaii, Nebraska, and Nevada begin June 25, 2002, July 20, 2002, and February 4, 1999,
16 respectively. (*See* ECF No. 1742 at 2 n.2) Through its expert, Irico can provide that new calculation
17 accounting for the IPPs’ modified volume of commerce.

18 **Effectiveness of CRT Conspiracy**

19 60. CRT prices were constrained by LCD and plasma technologies, which were rapidly
20 replacing CRTs during the relevant time period. (ECF No. 5589 ¶¶ 134, 160; ECF No. 436 ¶¶ 107,
21 109) Competition from close substitutes constrains an alleged conspiracy’s ability to maintain price
22 increases on that product. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 17 n.41) That effect played
23 out in the CRT markets, where CDT prices declined faster than CPT prices after LCD computer
24 products became more competitive in 2000, (*id.* ¶ 23) and the prices of large CPT products declined
25 faster than the prices of smaller CPTs after LCD and plasma TV products became more price
26 competitive in 2002. (*Id.* ¶ 24)

27 61. The CRT industries were relatively unconcentrated. Antitrust and economic
28 literature recognize that conspiracies are more likely to be effective at raising prices in markets that

are concentrated and less likely to be effective at raising prices in markets that are unconcentrated. (See Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 26 n.61 (citing JOHN M. CONNOR, GLOBAL PRICE FIXING 34 (2d ed. 2008) and LUIS CABRAL, INTRODUCTION TO INDUSTRIAL ORGANIZATION 137-138 (2000)))

62. DPPs' expert Johnson confirmed that both the CPT and CDT markets are relatively unconcentrated. (Ex. 202, May 26, 2023 Johnson Rep. at 7 ¶ 17; see also Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. ¶ 31)

63. Under economic theory and as shown above with reduced overcharges when CPT and CDT market conditions are accounted for, alleged conspiracies are less likely to be effective in dynamic, evolving industries. (See Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 26 n.61 (citing Margaret C. Levenstein & Valerie Y. Suslow, *Breaking Up is Hard to Do: Determinants of Cartel Duration*, 54 J. L. & Econ. 455, 456 (2011) and Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?* 64 J. Econ. Lit. 43, 48))

64. CRT Suppliers differed in their level of vertical integration. Economic literature states that collusion between firms with different levels of vertical integration is less feasible than collusion between firms that are similarly integrated because it may be more difficult to detect at which point in the distribution chain cheating occurs. (See Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at 26 n.65 (citing DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 163 (4th ed. 2015))) During the relevant time period, several large manufacturers including Hitachi, Mitsubishi, and Thomson were integrated with TV and/or monitor manufacturers while others like Chunghwa and Irico were not (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. at ¶ 33)

65. The evidence indicated a wide dispersion of product prices even when controlling for factors such as manufacturer, size, and finish that would otherwise explain such variation. (Ex. B, May 20, 2025 (Vol. 2) Tr. at 208:2-210:25)

66. Most CDTs and CPTs sold during the relevant time period were not subject to target prices. (Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep. ¶ 37)

1 67. Using the DPPs’ and Johnson’s data of alleged target prices for manufacturer,
2 application, size, quarter, and finish, Guerin-Calvert found that only 33.4% of global CDT revenue
3 and 13% of global CPT revenue were subject to these target prices. (*Id.*)

4 68. Netz alleged that target prices she identified corresponded to 39% of CDT sales and
5 29.7% of CPT sales, (Ex. 3, Apr. 15, 2014 Netz Rep. at 63) but Guerin-Calvert and Willig found
6 that these numbers were inaccurate. (*See* Ex. 11, Aug. 5, 2014 Guerin-Calvert Rep. ¶ 68, Table 2;
7 Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 33)

8 69. Guerin-Calvert found that 54.5% of the CPT sales and 83.1% of the CDT sales with
9 target prices identified by Johnson were priced below the alleged target price during the quarter that
10 Johnson identified the target price. (*See* Ex. 204, Jul. 21, 2023 Guerin-Calvert Rep., Figure 8)

11 70. Willig found that 60.4% of CPT sales for which Netz identified a target price were
12 priced below that target price. (Ex. 10, Aug. 5, 2014 Willig Rep. ¶ 35)

13 71. Guerin-Calvert analyzed the heterogeneity of CRT products and found that “a very
14 large proportion of the prices are moving in a downward direction at the same time where others are
15 moving in an upward direction.” (Ex. B, May 20, 2025 (Vol. 2) Tr. at 226:22-227:2)

16 72. Guerin-Calvert found that “in any given quarter, there are price increases that are well
17 above that 5 percent or even 10 percent [price target] that could change share” which “are indicia
18 that even within a given time period, these prices are changing in different orders of magnitude.”
19 (*Id.* at 226:22–227:2)

20 73. Guerin-Calvert’s analysis of heterogeneity calls into question Plaintiffs’ allegations
21 of price structures and establishes that the alleged cartel members’ prices were not moving in the
22 same direction. (*Id.* at 227:19–24)

23 74. Guerin-Calvert analyzed empirical evidence related to output and production and
24 found that for CDTs there was a “significant expansion of output by the alleged conspirators up until
25 2000, and then after that, there is an increasing penetration of LCD...through 2004.” (*Id.* at 229:2–
26 4). Guerin-Calvert also found that CPT production saw “significant increases.” (*Id.* at 229:5)

1 75. During the hearing, Netz and Johnson focused primarily on non-empirical, anecdotal
2 documentary and testimonial evidence to argue that the alleged conspiracy was effective and actually
3 impactful. (*See* Ex. A, May 19, 2025 (Vol. 1) Tr. at 28:1–2, 29:21–22; 137:13-17)

4 **Applying Overcharges**

5 76. Johnson’s model and Netz’s models seek to measure the same thing: aggregate
6 overcharge estimates, *i.e.*, the percentage difference between actual and but-for prices, for CDTs and
7 CPTs from 1995 to 2007. (*See* Ex. B, May 20, 2025 (Vol. 2) Tr. at 233:9-18)

8 77. Netz’s modified model, which has been modified to include adding control variables
9 to account for demand and cost changes and dummy variables for 1995-1996 to account for the
10 Windows 95 demand shock, is the most appropriate of the four models for calculating damages. (Ex.
11 B, May 20, 2025 (Vol. 2) Tr. at 284:3-285:23)

12 **Multicollinearity**

13 78. Multicollinearity goes to the precision of estimates and not to bias or accuracy. *Id.* at
14 262:14-263:2, 265:17-266:3; *see also* Ex. 203, Sept. 1, 2023 Expert Rep. of Johnson at 58, ¶ 114,
15 n.178 (citing Jeffrey M. Wooldridge, *Introductory Econometrics*, 5th Ed. (2012) at 95-98)).

16 79. Netz testified that a sufficient degree of multicollinearity can lead to “meaningless”
17 results, but that some multicollinearity results in “reliable estimates” that are “just not as precise as
18 they would be without multicollinearity.” (Ex. A, May 19, 2025 (Vol. 1) Tr. at 97:8-97:15)

19 80. Netz did not conduct any tests to determine the degree of multicollinearity between
20 these added variables. (*Id.* at 98:15-98:20)

21 81. Johnson did not test the degree of multicollinearity in the modified version of his
22 model. (*Id.* at 164:7-164:12)

23 82. Johnson’s purported “symptoms” of multicollinearity do not show a sufficient degree
24 of multicollinearity to create meaningless results. (*See id* at 164:7-164:22; Ex. B, May 20, 2025 (Vol.
25 2) Tr. at 173:16-174:4, 265:17-266:3; Ex. 203, Sept. 1, 2023 Expert Rep. of Johnson at 58 ¶ 144)

26 83. Guerin-Calvert tested her modifications to Johnson’s model and confirmed that it did
27 not produce meaningless results. (Ex. 204, Jul. 21, 2023 Expert Rep. of Guerin-Calvert at 72, n.181)
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II. PROPOSED CONCLUSIONS OF LAW.

1. Upon default, only those “factual allegations of the complaint, except those relating to the amount of damages, will be taken as true” because a default “establishe[s] ... liabilities, but not the extent of the damages to the plaintiff class.” *Geddes v. Un. Fin. Grp.*, 559 F.2d 557, 560 (9th Cir. 1977).

2. “If the facts necessary to determine damages are not contained in the complaint, or are legally insufficient, they will not be established by default.” *Elektra Entm’t Group, Inc. v. Bryant*, No. CV 03-6381, 2004 WL 783123, at *2 (C.D. Cal. Feb. 13, 2004).

3. With respect specifically to antitrust claims, “[i]n addition to establishing that [a defendant] has violated the anti-trust laws, [the plaintiff] before being entitled to award of damages must establish that [the defendant]’s violations of the anti-trust laws were a proximate cause of injury to it, and must also prove the extent of that injury.” *Talon, Inc. v. Union Slide Fastener, Inc.*, 266 F.2d 731, 736 (9th Cir. 1959). Indirect and direct purchaser plaintiffs both “must demonstrate that they paid a higher price for [the products at issue] than they would otherwise have paid absent a conspiracy[.]” with that difference between the paid and but-for prices often referred to as the “overcharge.” *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 499 (N.D. Cal. 2008).

4. Indirect and direct purchaser plaintiffs both “must demonstrate that they paid a higher price for [the products at issue] than they would otherwise have paid absent a conspiracy,” with that difference between the paid and but-for prices often referred to as the “overcharge.” *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 499 (N.D. Cal. 2008). direct and indirect purchasers must by definition rely on the same theory of damages. (See, e.g., *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 499 (N.D. Cal. 2008) (“Indirect-purchaser plaintiffs, like direct-purchaser plaintiffs, must demonstrate that they paid a higher price for graphics chips and graphics cards than they would otherwise have paid absent a conspiracy.”))

5. The court is permitted to consider the DPP model and Irico’s corrections to the DPP model in the IPP case and the IPP case and Irico’s corrections to the IPPPO model within the DPP case. (See *In re Exxon Valdez*, 270 F.3d 1215, 1248 (9th Cir. 2001) (“Reasonable jurors need not

1 accept the views of one side’s expert or the other’s, but may make their own reasonable judgment
2 on the evidence, accepting part, all, or none of any witness’s testimony.”); *see also Hall v. Hall*, 584
3 U.S. 59, 77 (2018) (“District courts enjoy substantial discretion in deciding whether and to what
4 extent to consolidate cases.”).

5 6. Generally, when two competing damages models, presented on the plaintiffs’ side,
6 “produce different results, the question of which model is more accurate falls to the factfinder as
7 part of a classic battle of the experts. After hearing each expert's thoughts about why one model is
8 better than the other, the factfinder then weighs the experts’ testimony and decides which model she
9 trusts more.” (*Orshan v. Apple Inc.*, No. 5:14-CV-05659-EJD, 2024 WL 4353034, at *5 (N.D. Cal.
10 Sept. 30, 2024))

11 7. While the fact that neither DPPs nor IPPs demand a specific amount in their pleadings
12 does not bar their recovery of damages, they should not be awarded damages above what they each
13 claim in their respective expert reports. (*See* Fed. R. Civ. P. 54(c) (“[a] default judgment must not
14 differ in kind from, or *exceed in amount*, what is demanded in the pleadings”); *Air Doctor LLC v.*
15 *Wiamen Qichuang Trade Cp., Ltd.*, 134 F.4th 552, 553 (9th Cir. 2025) (“Rule 54(c) does not prohibit
16 awarding actual damages in a default judgment to a party that sought in its pleadings actual damages
17 in an amount to be determined at trial”))

18 8. Indirect purchasers’ “burden is two-fold. Not only must they show that all or nearly
19 all of the original direct purchasers of [the relevant products] bought at inflated prices, they must
20 also show those overcharges were passed through all stages of the distribution chain” to the IPPs. *In*
21 *re Optical Disk Drive Antitrust Litig.*, 303 F.R.D. 311, 324 (N.D. Cal. 2014).

22 9. If there is “change over time, it would be improper to use ... models that do not reflect
23 these variations over time.” *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 496
24 (N.D. Cal. 2008) (quoting ABA Section of Antitrust Law, *Econometrics: Legal, Practical, and*
25 *Technical Issues* 224 (2005)); *see also One Hour Air Conditioning Franchising SPE LLC v. Bigham*
26 *Servs., Inc.*, No. 21-CV-07891, 2022 WL 3132424, at *1 (N.D. Cal. Aug. 5, 2022) (“The Court
27 cannot assume that the average net sales over the thirteen-month period immediately preceding the
28

1 breach reasonably represents the net sales Bigham Services would accrue for the entire eight years
2 of the contracts' term that remained after the breach.”))

3 10. It is well-settled that, in antitrust conspiracy cases, other alleged conspirator and
4 defendant “settlement payments should be deducted from the damages after they have been trebled.”
5 *William Inglis & Sons Baking Co. v. Cont'l Baking Co.*, 981 F.2d 1023, 1024 (9th Cir. 1992). Here,
6 \$212.2 million must be deducted from DPP trebled damages, and \$580.75 million must be deducted
7 from IPP damages, after any trebling. ECF Nos. 5168, 5116, 6335, 6192.

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Respectfully submitted,

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